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(71) Applicant (for all designated States except US): GRACO  
MINNESOTA INC. [US/US]; 60 11th Ave. N.E., Min-  
neapolis, MN 55413 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MCCORMICK,

Martin [US/US]; 21830 Iden Avenue, Forest Lake, MN  
55025 (US). WEIKEL, William [US/US]; 18046 87th  
Avenue North, Maple Grove, MN 55311 (US). DENE-  
SON, Bret [US/US]; 9166 Comstock Lane North, Maple  
Grove, MN 55311 (US). LARSEN, David [US/US]; 5475  
Kalenda Drive, Albertville, MN 55301 (US).

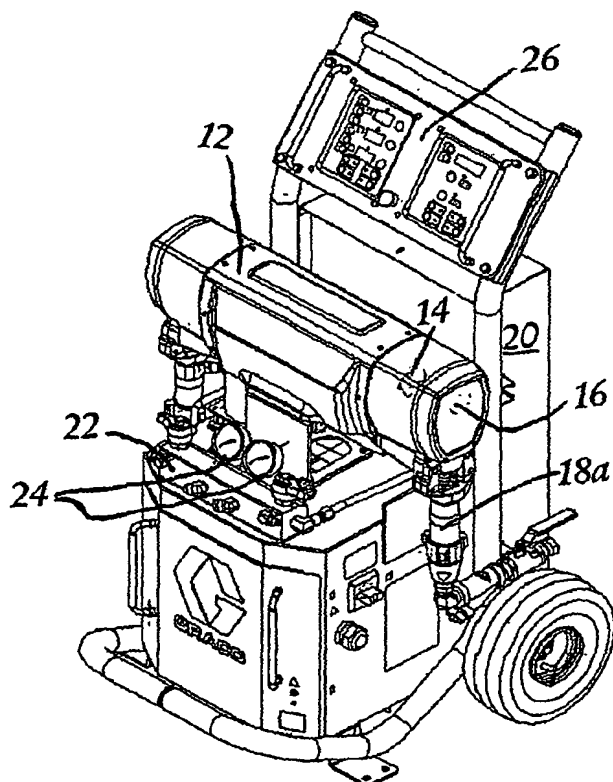
(74) Agent: FARROW, Douglas; GRACO MINNESOTA  
INC., 60 11th Ave. N.E., Minneapolis, MN 55413 (US).

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(54) Title: FAST SET MATERIAL PROPORTIONER



(57) **Abstract:** The proportioner (10) has a variable speed controlled DC motor (12) having a gearbox (14) and crankshaft (16) at either end which are connected to reciprocating piston pumps (18). The outputs (18a) of the two pumps (18) are fed to a manifold (22) where the pressure of each output is measured. The user sets a setpoint pressure (e.g. 1000 psi) and the controller (26) then compares the pressures of the two components and controls the higher of the two relative to the setpoint. Ratio assurance is monitored by continuing to look at both output pressures. If one side falls below a predetermined percentage of the setpoint (50% in the preferred embodiment), an alarm may be raised or operation stopped.



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